## ABSTRACT OF THE DISCLOSURE

The present invention includes embodiments that minimize storage space and storage time in storage systems. In particular, the present invention appends additional information to data that will be stored. The contents of the additional information indicate the status of the stored data. Preferably, the additional information is not combined with another type of information so that it directly indicates the status of the stored data. Alternatively, the additional information can be used to determine the status of one or more corresponding data that are not the data to which the additional information is appended.